



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/587,249 | 07/26/2006 | Tomoharu Nishioka | SPL-06-1211 | 9642 |

35811 7590 01/08/2010
IP GROUP OF DLA PIPER LLP (US)
ONE LIBERTY PLACE
1650 MARKET ST, SUITE 4900
PHILADELPHIA, PA 19103

| |
|----------|
| EXAMINER |
|----------|

KASHNIKOW, ERIK

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1794

| | |
|-------------------|---------------|
| NOTIFICATION DATE | DELIVERY MODE |
|-------------------|---------------|

01/08/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

pto.phil@dlapiper.com

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/587,249 | Applicant(s) NISHIOKA ET AL. | |
| | Examiner ERIK KASHNIKOW | Art Unit 1794 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12,13,17,19,21-23,27-29,31 and 33-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12,13,17,19,21-23,27-29,31 and 33-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>10/02/09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 12, 13, 17, 19, 21, 22, 23, 27-29, 31, 33-37 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These claims are rejected as a layer, in this case layer b, which consists of a semi-aromatic polyamide, can not optionally include additional additives as consisting of is closed language and limits the claim to the semi-aromatic polyamide.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 12-13, 15, 17, 21-23, 27-31 and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishi et al (US 6,656,553) in view of Nishi et al (JP 07-173447) hereinafter Nishi JP.

In regards to claims 12-13 and 21 Nishi et al. teach a 3 layer tube with the inner most layer being a fluorine containing polymer with functional group which has reactivity with polyamide based resins, including terephthalic acid and 1,9-nonanediamine (claims 1 and 2 and column 5 lines 55 to column 6 line 65) and teaches an additional outer layer for the tube (claim 5) and gives polyamide 12 as an example of the polyamide for the outer layer (example 2). Further Nishi et al. teach that it is known in the art to add flame retardants, lubricants and dyes to fuel hoses to improve aesthetic properties, and protect against fires (6,656,553 column 8 lines 30-40).

5. In regards to claim 17 and 27 Nishi et al. teach in claim 1 that the fluorine layer is an ethylene/tetrafluoroethylene copolymer.

6. In regards to claims 15 and 22 the intermediate layer taught by Nishi et al. would meet all the limitations of Applicant's layers (b) and (d). It teaches polyamides that maybe semi-aromatic polyamides that have terminal amino groups present in ratios which can fit the concentration limitations of applicant's claims (column 5 lines 55 to column 6 line 65). As such examiner points to MPEP 2144.04 section VI which states that duplication of parts has no patentable significance unless new and unexpected results are produced. As both layers are used to increase adhesion to the other layers no unexpected results would be produced. It is also pointed out that one would be motivated to double the layers, and place them adjacent to each other to increase the overall adhesive strength between all the layers. Nishi et al. further teaches that the tube can be co extruded (column 1 lines 50-60).

7. In regards to claim 23 Nishi et al. teach that the Polyamide layer can be an outer layer (claims 1 and 5-7).
8. In regards to claim and 28 Examiner treats these claims as product by process claims (MPEP 2113) and therefore patentability is defined by the product itself and not by the process, as such the terminal modified polyamine is the product and has been previously rejected. In this case the Applicant's and the reference teach a polyamide that has been modified by a diamine, in this instance, a product by process claim, the process of making the product, whether it be adding the diamine during the polymerization or after polymerization leads to the same product, and the claims are therefore rejected.
9. In regards to claims 29 and 31 Nishi et al. teach adding a conductivity imparting filler to the inner layer when the hose is to be used as a fuel hose/tube (column 9 lines 22-30).
10. As stated above Nishi teach a 3 layer tube with an outer polyamide layer and a fluoropolymer layer however they are silent with regards to the use of carboxylic anhydride groups used therein.
11. In regards to claims 12, 22 and 33-35 Nishi JP teach fluoropolymers with carboxylic anhydride groups therein which is useful for bonding to various organic and inorganic materials (claim 2), including polyamides (paragraph 0058).
12. One of ordinary skill in the art at the time of the invention would be motivated to modify the invention of Nishi JP with that of Nishi et al. because the invention of Nishi JP offers firm adherence to a wide variety of substrates (paragraph 0001).

13. Claims 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishi et al (US 6,656,553) in view of Nishi et al (JP 07-173447) hereinafter Nishi JP.

14. As stated above Nishi et al. and Nishi JP teach a hose with 3 layers, wherein a polyamide layer is an outer layer and a fluoropolymer layer is an inner layer, however they are silent with regards the functional group of the fluoropolymer layer being itaconic acid anhydride.

15. Audenaert et al. teach a thermoplastic resin containing fluorine polymer for rendering substances oil, water or stain repellant (paragraph 0002)

16. In regards to claims 36 and 37 Audenaert et al. teach that the functional group for the fluorine containing compound can be an itaconic acid anhydride (paragraph 0050), which applicants list in their specification as one of the preferred functional groups to be added to the fluorine containing polymer.

17. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the fuel tube of Nishi and Nishi JP with the fluorine containing polymer of Audenaert et al. because the tube of Nishi and Nishi would benefit from the improved oil repellant properties of the polymer of Audenaert et al. (column 1 lines 4-9) as well as increased interface affinity between the fluoropolymer and the thermoplastic polymer.

18. Claims 12-13, 17, 21-23, 27-28 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stoeppelmann (US 5,869,157) in view of Shimizu et al. (US 5,750,626), Oka et al. (US 5,670,608) and Nishi et al. (JP 07-173447).

19. Stoeppelmann teaches new polyamide based adhesion promoter that works well with fluoropolymers (column 1 line 11-13).

20. In regards to claims 12, 13 and 23 Stoeppelmann teaches a three layer system comprising a fluoropolymer inner layer, an intermediate adhesion promoting layer, which comprises a polyamide having amino and carboxyl groups, and a polyamide outer layer (claim 1). Stoeppelmann teaches that the outer layer includes polyamide 12 (column 5 lines 58-59). Stoeppelmann teaches that the polyamine intermediate layer can be PA6T, where T is a terephthalic acid compound (column 3, lines 42-43), as well as the addition of dodecyl or decyl diamines (column 2 lines 67-68). While Stoeppelmann is silent regarding the mol% of the terephthalic acid and the additive amines, it has been shown that absent a showing of criticality with respect to "the concentrations" (a result effective variable), it would have been obvious to a person of ordinary skill in the art at the time of the invention to adjust the "concentrations" through routine experimentation in order to achieve "polyamide based adhesion promoter". It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Stoeppelmann further teaches that the innermost layer be a fluoropolymer (claim 1). Examiner also points out that while Stoeppelmann teaches an added diamine it is not

required (column 4 lines 19-27). Further, Examiner points out that nonpreferred disclosures can be used. A nonpreferred portion of a reference disclosure is just as significant as the preferred portion in assessing the patentability of claims.” In re Nehrenberg, 280 F.2d 161, 126 USPQ 383 (CCPA 1960).

21. In regards to claims 15 and 22 the intermediate layer taught by Stoeppelmann would meet all the limitations of Applicant's layers (b) and (d). It teaches polyamides that maybe semi-aromatic polyamides that have terminal amino groups present in ratios which can fit the concentration limitations of applicant's claims (column 3 lines 55-68). As such examiner points to MPEP 2144.04 section VI which states that duplication of parts has no patentable significance unless new and unexpected results are produced. As both layers are used to increase adhesion to the other layers no unexpected results would be produced. It is also pointed out that one would be motivated to double the layers, and place them adjacent to each other to increase the overall adhesive strength between all the layers. Stoeppelmann further teaches that the tube can be co extruded (column 5 lines 25-26).

22. In regards to claims 17 and 27 Stoeppelmann teaches that the fluoropolymer layer can be a combination of hexafluoropropylene, tetrafluoroethylene and vinylidene fluoride (Claim 2).

23. In regards to claim and 28 Examiner treats these claims as product by process claims (MPEP 2113) and therefore patentability is defined by the product itself and not by the process, as such the terminal modified polyamine is the product and has been previously rejected. In this case the Applicant's and the reference teach a polyamide

Art Unit: 1794

that has been modified by a diamine, in this instance, a product by process claim, the process of making the product, whether it be adding the diamine during the polymerization or after polymerization leads to the same product, and the claims are therefore rejected.

24. In regards to claims 21 and 31 Stoeppelmann teaches that these tubes are to be used as fuel lines (column 2 lines 49-50).

25. While Stoeppelmann teaches the three layer fuel line as stated above he is silent regarding the functional groups added to the fluoropolymer.

26. Shimizu et al. teach a thermoplastic resin containing fluorine which has improved mechanical and chemical abilities (column 1 lines 4-9)

27. In regards to claim 12 Shimizu et al. teach that the functional group for the fluorine containing compound can be an epoxy group (column 7 lines 26-27), which applicants list in their specification as one of the preferred functional groups to be added to the fluorine containing polymer. Shimizu et al. teach that this functional group is added to increase and improve interface affinity between the fluorine containing polymers and various thermoplastics, including polyamides (column 11 lines 25-45). Shimizu et al. teach that this fluorine containing polymer can be used in automobile fuel applications (column 11 lines 1-5).

28. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the tube of Stoeppelmann with the fluorine containing polymer of Shimizu et al. because the tube of Stoeppelmann which has resistance to fuels and an adequately low permeation (column 2 lines 45-49) would benefit from the improved

Art Unit: 1794

mechanical and chemical properties of the polymer of Shimizu et al. (column 1 lines 4-9) as well as increased interface affinity between the fluoropolymer and the thermoplastic polymer.

29. As stated above Stoeppelmann and Shimizu et al. teach a fuel hose which comprises three layers including an intermediate layer which contains a polyamide which is modified with terephthalic acid and a long chain alkyl amides. However they are silent regarding that amide being 1,9-nonanediamine.

30. In regards to claims 12 and 22 Oka et al. teaches a polyamide composition which has superior moldability, heat resistance and mechanical characteristics (column 1 lines 6-11).

31. Oka et al. teach that the polyamide composition comprises a polyamide, terephthalic acid and 1,9-nonanediamine (column 2 lines 45-50).

32. One of ordinary skill in the art at the time of the invention would be motivated to modify the tube of Stoeppelmann and Shimizu et al. with the polymer of Oka et al. because the polymer of Oka et al. would offer superior moldability, heat resistance and mechanical characteristics (column 1 lines 6-11) to the tubes of Stoeppelmann and Shimizu et al.

33. As stated above Stoeppelmann Oka and Shimizu et al. teach a fuel hose which comprises three layers including an intermediate layer which contains a polyamide which is modified with terephthalic acid and a long chain alkyl amides, and a fluorine containing polymer modified with a functional group with affinity for polyamides. However they are silent regarding that functional group being an acid anhydride.

Art Unit: 1794

34. In regards to claims 12 and 22 Nishi et al. teach fluoropolymers with carboxylic anhydride groups therein which is useful for bonding to various organic and inorganic materials (claim 2), including polyamides (paragraph 0058).

35. One of ordinary skill in the art at the time of the invention would be motivated to modify the invention of Nishi et al. with that of Stoeppelmann Shimizu and Oka et al. because the invention of Nishi et al. offers firm adherence to a wide variety of substrates (paragraph 0001).

36. Claims 12-13, 17, 21-23, 27-28, 31, 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stoeppelmann (US 5,869,157) in view of Audenaert et al. (US 2004/0077775) Oka et al. (US 5,670,608) and Nishi et al. (JP 07-173447).

37. Stoeppelmann teaches new polyamide based adhesion promoter that works well with fluoropolymers (column 1 line11-13).

38. In regards to claims 12, 13 and 23 Stoeppelmann teaches a three layer system comprising a fluoropolymer inner layer, an intermediate adhesion promoting layer, which comprises a polyamide having amino and carboxyl groups, and a polyamide outer layer (claim 1). Stoeppelmann teaches that the outer layer includes polyamide 12 (column 5 lines 58-59). Stoeppelmann teaches that the polyamine intermediate layer can be PA6T, where T is a terephthalic acid compound (column 3, lines 42-43), as well as the addition of dodecyl or decyl diamines (column 2 lines 67-68). While Stoeppelmann is silent regarding the mol% of the terephthalic acid and the additive amines, it has been shown that absent a showing of criticality with respect to "the

Art Unit: 1794

concentrations" (a result effective variable), it would have been obvious to a person of ordinary skill in the art at the time of the invention to adjust the "concentrations" through routine experimentation in order to achieve "polyamide based adhesion promoter". It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Stoeppelmann further teaches that the innermost layer be a fluoropolymer (claim 1). Examiner also points out that while Stoeppelmann teaches an added diamine it is not required (column 4 lines 19-27). Further, Examiner points out that nonpreferred disclosures can be used. A nonpreferred portion of a reference disclosure is just as significant as the preferred portion in assessing the patentability of claims." In re Nehrenberg, 280 F.2d 161, 126 USPQ 383 (CCPA 1960).

39. In regards to claim 22 the intermediate layer taught by Stoeppelmann would meet all the limitations of Applicant's layers (b) and (d). It teaches polyamides that maybe semi-aromatic polyamides that have terminal amino groups present in ratios which can fit the concentration limitations of applicant's claims (column 3 lines 55-68). As such examiner points to MPEP 2144.04 section VI which states that duplication of parts has no patentable significance unless new and unexpected results are produced. As both layers are used to increase adhesion to the other layers no unexpected results would be produced. It is also pointed out that one would be motivated to double the layers, and place them adjacent to each other to increase the overall adhesive strength between all the layers. Stoeppelmann further teaches that the tube can be co extruded (column 5 lines 25-26).

Art Unit: 1794

40. In regards to claims 17 and 27 Stoeppelmann teaches that the fluoropolymer layer can be a combination of hexafluoropropylene, tetrafluoroethylene and vinylidene fluoride (Claim 2).

41. In regards to claim and 28 Examiner treats these claims as product by process claims (MPEP 2113) and therefore patentability is defined by the product itself and not by the process, as such the terminal modified polyamine is the product and has been previously rejected. In this case the Applicant's and the reference teach a polyamide that has been modified by a diamine, in this instance, a product by process claim, the process of making the product, whether it be adding the diamine during the polymerization or after polymerization leads to the same product, and the claims are therefore rejected.

42. In regards to claims 21 and 31 Stoeppelmann teaches that these tubes are to be used as fuel lines (column 2 lines 49-50).

43. While Stoeppelmann teaches the three layer fuel line as stated above he is silent regarding the functional groups added to the fluoropolymer.

44. Audenaert et al. teach a thermoplastic resin containing fluorine polymer for rendering substances oil, water or stain repellant (paragraph 0002)

45. In regards to claim 12, 22, 36 and 37 Audenaert et al. teach that the functional group for the fluorine containing compound can be an itaconic acid anhydride (paragraph 0050), which applicants list in their specification as one of the preferred functional groups to be added to the fluorine containing polymer.

Art Unit: 1794

46. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the fuel tube of Stoeppelmann with the fluorine containing polymer of Audenaert et al. because the tube of Stoeppelmann which has resistance to fuels and an adequately low permeation (column 2 lines 45-49) would benefit from the improved oil repellant properties of the polymer of Audenaert et al. (column 1 lines 4-9) as well as increased interface affinity between the fluoropolymer and the thermoplastic polymer.

47. As stated above Stoeppelmann and Audenaert et al. teach a fuel hose which comprises three layers including an intermediate layer which contains a polyamide which is modified with terephthalic acid and a long chain alkyl amides. However they are silent regarding that amide being 1,9-nonanediamine.

48. In regards to claims 12 and 22 Oka et al. teaches a polyamide composition which has superior moldability, heat resistance and mechanical characteristics (column 1 lines 6-11).

49. Oka et al. teach that the polyamide composition comprises a polyamide, terephthalic acid and 1,9-nonanediamine (column 2 lines 45-50).

50. One of ordinary skill in the art at the time of the invention would be motivated to modify the tube of Stoeppelmann and Audenaert et al. with the polymer of Oka et al. because the polymer of Oka et al. would offer superior moldability, heat resistance and mechanical characteristics (column 1 lines 6-11) to the tubes of Stoeppelmann and Shimizu et al.

51. As stated above Stoeppelmann Oka and Shimizu et al. teach a fuel hose which comprises three layers including an intermediate layer which contains a polyamide

Art Unit: 1794

which is modified with terephthalic acid and a long chain alkyl amides, and a fluorine containing polymer modified with a functional group with affinity for polyamides.

However they are silent regarding that functional group being an acid anhydride.

52. In regards to claims 12 and 22 Nishi et al. teach fluoropolymers with carboxylic anhydride groups therein which is useful for bonding to various organic and inorganic materials (claim 2), including polyamides (paragraph 0058).

53. One of ordinary skill in the art at the time of the invention would be motivated to modify the invention of Nishi et al. with that of Stoeppelmann Shimizu and Oka et al. because the invention of Nishi et al. offers firm adherence to a wide variety of substrates (paragraph 0001).

54. Claims 19 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stoeppelmann (US 5,869,157) in view of Shimizu et al. (US 5,750,626) Oka et al. (US 5,670,608) Nishi et al. (JP 07-173447) and Krause et al. (US 5,554,425).

55. While Stoeppelmann Oka et al. and Shimizu et al. do state that at least one of the layers is electrically conductive (claim 4) they are silent regarding the fluoropolymer layer being electrically conductive.

56. Krause teaches fluoropolymer tubes used as fuel lines (column 1 lines 10-12).

57. Krause teaches that conductive particles are added to the fluoropolymer resin for the fuel tube (column 3 lines 55-60).

58. One of ordinary skill in the art at the time of the invention would be motivated to modify the tubes of Stoeppelmann and Nishi et al. Shimizu et al. with the fluoropolymer

Art Unit: 1794

of Krause et al. because the fluoropolymer of Krause et al. would add the ability to carry away electrical discharges that may form by the flow of liquids through the tube (column 1 lines 11-21 and column 3 lines 55-60) to the fuel tubes of Stoeppelmann and Shimizu et al.

Response to Arguments

59. In regards to Applicant's arguments concerning the 103 rejection, Examiner points out that as stated above Stoeppelmann teach that the diamine may be added but is not required (column 4 lines 19-27), and as such Stoeppelmann teaches embodiments that consist of the polyamide. It is noted that non preferred embodiments may be used, it is further noted that a known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use (MPEP 2123 II).

60. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the use of PA9t or PA9N) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). It is noted that the cited references meet the limitations set forth in the instant claims, that is to say the contain terephthalic acid and the specific diamines in the required ranges.

61. In regards to Applicant's arguments concerning the lack of 1,9-nonanediamine and a functional group capable of developing an affinity with amide resins on the fluorine containing polymer, this is why the Shimizu and Oka references have been added. Examiner notes that while Shimizu, Nishi, Krause and Oka et al. do not disclose all the features of the present claimed invention, they are used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, and in combination with the primary reference, discloses the presently claimed invention. If the secondary reference contained all the features of the present claimed invention, it would be identical to the present claimed invention, and there would be no need for secondary references.

62. In regards to Applicant's arguments that one of ordinary skill in the art at the time of the invention would not be motivated to modify the invention of Stoeppelmann with that of Shimizu or Oka, examiner points to the motivational statements previously provided for motivation. Examiner also points out that motivation to combine may be different than Applicant's motivation (MPEP 2144 Section IV). Examiner also points out that "obviousness under 103 is not negated because the motivation to arrive at the claimed invention as disclosed by the prior art does not agree with appellant's motivation", *In re Dillon*, 16 USPQ2d 1897 (Fed. Cir. 1990), *In re Tomlinson*, 150 USPQ 623 (CCPA 1966). Specifically regarding the Shimizu reference, even though Stoeppelmann may use an adhesive resin, one of ordinary skill in the art would still be

Art Unit: 1794

motivated to modify the fluoropolymer of Stoeppelmann with that Of Shimizu due to the increased interface affinity between the two polymers, or in other words due to an increased and stronger adhesion between the two polymers. In regards to the Oka reference Applicant's statement that there is no motivation to modify the intermediate layer of Stoeppelmann with that of Oka even when the entire disclosure is considered is a conclusionary statement not supported By evidence, and as such is not sufficient to demonstrate that there is no motivation to combine the references. The motivation to combine the references as previously stated is the superior moldability, heat resistance, and mechanical characteristics offered by the invention of Oka. It is pointed out that 2143.02 of the MPEP defines a reasonable expectation of success as when one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded nothing more than predictable results to one of ordinary skill in the art. Since both Stoeppelmann and Oka teach polyamides that comprise terephthalic acid and diamines, with the only difference between the two compounds is that Oka teaches specific diamines, one of ordinary skill in the art could modify the polyamide of Stoeppelmann with that of Oka by using known methods, with nothing more than predictable results being produced, and would be motivated to do so according to the motivational statement present previously.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIK KASHNIKOW whose telephone number is (571)270-3475. The examiner can normally be reached on Monday-Friday 7:30-5:00PM EST (Second Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Erik Kashnikow
Examiner
Art Unit 1794

/Rena L. Dye/
Supervisory Patent Examiner, Art Unit 1794

Application/Control Number: 10/587,249
Art Unit: 1794

Page 19